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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Matthew P.J. Baker

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EXAMINER

SIVJI, NIZAR N

ART UNIT

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2617

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/599,858	<b>Applicant(s)</b> BAKER ET AL.	
	<b>Examiner</b> NIZAR SIVJI	<b>Art Unit</b> 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 11-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 11-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 October 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
1. Claims 1-8, 11-16, 18-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Heeswyk US Patent No. 6, 765, 883 in view of Sinnarajah et al. Pub. No. 2004/0008679.

**Regarding Claim 1**, Heeswyk disclose providing a primary station (PS) (Fig. 1 Unit 24) and a plurality of secondary stations (SS1, SS2, SS3), (Fig. 1 Unit 28 a-n) determining, via the primary station(Col 7 L 15-50, transmission path between a subscriber station 28 and base station 24 where base station transmit timing signal to the receiving station), a level of interest (col 7 L 31, subscriber station 28 of interest) by users of secondary stations in a service by providing a plurality of random access slots (Col 8 L 10-17 and Fig. 4d, user control channel 104 wherein one or more slots 120 are

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designated as random access slot which can be used by subscriber station refer to as level of interest by user of secondary station) that are selectively configured for permitting a temporary or permanent allocation of a portion of the plurality of random access slots based on the level of interest of the users of the secondary stations (Col 8 L 31-35, if subscriber station 28 has been assigned a random access slot or slots, which are shared with other subscriber stations 28, system 28 can either have the subscriber 28 release its use of these random access slots or merely cease using them when it is assigned a dedicated channel 100 refer to as temporary allocation of a portion of the plurality of random access slot. Thus if the subscriber station 28 releases its access to such slots, system 20 can assign those slots to another subscriber station 28). Heeswyk disclose (col 8 L 45-50), when a dedicated channel is no longer needed by a subscriber station 28, a slot 120 or portion of a slot 120, or one or more random access slots in a user control channel 104 are assigned to subscriber station 28, preferably before the dedicated channel is released. Further (Col 2 L 10-50) disclose subscriber station indicating level at which to receive transmission from the base station. Heeswyk differ from the claimed invention in not specifically teaching the level of interest by transmitting a predetermined signal. However, Sinnarajah disclose (Para 88-91) a multicast call between a primary station and multiple subscriber where if the subscriber station respond based on level of interest. If the subscriber station is interested in participation in the multicast server, the message is sent on a reverse channel to access network. Therefore, it is obvious to one having ordinary skill in the art at the time the invention was made that the level of interest by transmitting a predetermined signal as

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per teaching of Sinnarajah so as to received transmission from the base station based on indicated power level.

**Regarding Claim 2**, Sinnarajah disclose wherein the primary station estimates the level of interest from a number of transmitted indications and selects a transmission mode of the service in dependence on whether the level of interest is relatively high or relatively low (Para 91).

**Regarding Claim 3**, Sinnarajah disclose wherein the transmission mode for the relatively high level of interest is point-to-multipoint (Para 124).

**Regarding Claim 4**, Sinnarajah disclose wherein the transmission mode for the relatively low level of interest is point-to-point (Para 126).

**Regarding Claim 5**, Heeswyk disclose wherein the primary station sets a threshold level for determining the transmission mode of the service and, when the number of transmitted indications exceeds the threshold level, the transmission mode for the relatively high level of interest is operated (col 11 L 20 – 35 and also see Sinnarajah Para 126).

**Regarding Claim 6**, Heeswyk disclose wherein each access slot of the plurality of random access slots includes a combination of one time slot and one signature, and wherein the primary station maps each of the plurality of random access slots to a different service such that all the secondary stations interested in one service transmit using one of the plurality of random access slots, and in that each combination of one time slot and one signature is contained in not more than one of the plurality of random access slots (55 – Col 6 L 5 and also see Fig. 4a-d)

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**Regarding Claim 7**, Heeswyk disclose wherein each of the plurality of random access slots uses the same signature and in that each random access slot in the plurality of random access slots uses a different time slot (Col 5 L 55 – 65).

**Regarding Claim 8**, Heeswyk disclose wherein each of the plurality of random access slots uses the same time slot and in that each random access slot in the plurality of random access slots uses a different signature (Col 5 L 55 – 65).

**Regarding Claim 11**, Heeswyk disclose random access time slot further wherein the level of interest is transmitted as spread spectrum signals and a number of indications is estimated by estimating a number of correlation peaks (Col 2 L 10 - 55).

**Regarding Claim 12**, Sinnarajah disclose wherein the level of interest is transmitted as spread spectrum signals (Para 5) and Heeswyk disclose a number of indications is estimated by estimating a received energy in a given random access slot (Col 10 L 26 – 35).

**Regarding Claim 13**, Heeswyk disclose wherein the secondary stations are allocated to a respective one of two or more pluralities of access slots and in that a secondary station of the plurality of secondary stations desiring to transmit an indication of interest, transmits in its allocated plurality of random access slots (fig. 4d).

**Regarding Claim 14**, Sinnarajah disclose wherein when an estimated level of interest exceeds a predetermined level of interest, the primary station instructs the plurality of secondary stations waiting to transmit in their allocated access slot not to transmit (Para 174).

**Regarding Claim 15**, Heeswyck disclose wherein a secondary station of the plurality of

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secondary stations indicating an interest in the service also indicates a quality level for receiving the service (Col 9 L 11-25).

**Regarding Claim 16**, Heeswyk disclose wherein the primary station transmits a higher quality level of service in a mode different from the transmission of a lower quality level of service (Col 9 L 32-39).

**Regarding Claim 18**, Heeswyk disclose a primary station (PS) (Fig. 1 Unit 24) and a plurality of secondary stations (SS1, SS2, SS3) (Fig. 1 Unit 28 a-n), wherein the primary station (PS) includes means for determining a level of interest (col 7 L 31, subscriber station 28 of interest) by users of secondary stations in a service (Col 7 L 15-50, transmission path between a subscriber station 28 and base station 24 where base station transmit timing signal to the receiving station), the means providing a plurality of random access slots (Col 8 L 10-17 and Fig. 4d, user control channel 104 wherein one or more slots 120 are designated as random access slot which can be used by subscriber station refer to as level of interest by user of secondary station) that are selectively configured for permitting a temporary or permanent allocation of a portion of the plurality of random access slots based on the level of interest of the users of the secondary stations (Col 8 L 31-35, if subscriber station 28 has been assigned a random access slot or slots, which are shared with other subscriber stations 28, system 28 can either have the subscriber 28 release its use of these random access slots or merely cease using them when it is assigned a dedicated channel 100 refer to as temporary allocation of a portion of the plurality of random access slot. Thus if the subscriber station 28 releases its access to such slots, system 20 can assign those slots to another

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subscriber station 28). Heeswyk disclose (col 8 L 45-50), when a dedicated channel is no longer needed by a subscriber station 28, a slot 120 or portion of a slot 120, or one or more random access slots in a user control channel 104 are assigned to subscriber station 28, preferably before the dedicated channel is released. Further (Col 2 L 10-50) disclose subscriber station indicating level at which to receive transmission from the base station. Heeswyk differ from the claimed invention in not specifically teaching the level of interest by transmitting a predetermined signal. However, Sinnarajah disclose (Para 88-91) a multicast call between a primary station and multiple subscriber where if the subscriber station respond based on level of interest. If the subscriber station is interested in participation in the multicast server, the message is sent on a reverse channel to access network. Therefore, it is obvious to one having ordinary skill in the art at the time the invention was made that the level of interest by transmitting a predetermined signal as per teaching of Sinnarajah so as to received transmission from the base station based on indicated power level.

**Regarding Claim 19**, Sinnarajah disclose estimating means for estimating the level of interest from a number of transmitted indications and mode selection means for selecting a transmission mode of the service in dependence on whether the level of interest is relatively high or relatively low (Para 91).

**Regarding Claim 20**, Heeswyk disclose wherein each access slot includes a combination of one time slot and one signature, wherein the primary station (PS) comprises means for mapping each of the plurality of random access slots to a different service such that all the secondary stations interested in one service transmit using one



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of the plurality of random access slots, and wherein each combination of one time slot and one signature is contained in not more than one of the plurality of random access slots(55 – Col 6 L 5 and also see Fig. 4a-d)

**Regarding Claim 21**, Sinnarajah disclose spread spectrum transceiving means (Para 5) and Heeswyk disclose wherein an estimating means is adapted to estimate the level of interest by estimating a number of correlation peaks in a respective random access slot (Col 10 L 26 – 35).

**Regarding Claim 22**, Sinnarajah disclose spread spectrum transceiving means (Para 5) and wherein an estimating means is adapted to estimate the level of interest by estimating a received energy in a respective random access slot (Col 10 L 26 – 35).

**Regarding Claim 23 and 24**, Heeswyk disclose at least one primary station (PS) (Fig. 1 Unit 24) and a plurality of secondary stations (SS1, SS2, SS3) (Fig. 1 Unit 28 a-n), wherein the primary station (PS) includes means for determining (Col 7 L 15-50, transmission path between a subscriber station 28 and base station 24 where base station transmit timing signal to the receiving station), a level of interest (col 7 L 31, subscriber station 28 of interest) a level of interest (col 7 L 31, subscriber station 28 of interest) by users of secondary stations in a service(Col 8 L 10-17 and Fig. 4d, user control channel 104 wherein one or more slots 120 are designated as random access slot which can be used by subscriber station refer to as level of interest by user of secondary station), the means providing a plurality of random access slots that are selectively configured for permitting a temporary or permanent allocation of a portion of the plurality of random access slots based on the level of interest of the users of the

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secondary stations(Col 8 L 31-35, if subscriber station 28 has been assigned a random access slot or slots, which are shared with other subscriber stations 28, system 28 can either have the subscriber 28 release its use of these random access slots or merely cease using them when it is assigned a dedicated channel 100 refer to as temporary allocation of a portion of the plurality of random access slot. Thus if the subscriber station 28 releases its access to such slots, system 20 can assign those slots to another subscriber station 28). Heeswyk disclose (col 8 L 45-50), when a dedicated channel is no longer needed by a subscriber station 28, a slot 120 or portion of a slot 120, or one or more random access slots in a user control channel 104 are assigned to subscriber station 28, preferably before the dedicated channel is released. Further (Col 2 L 10-50) disclose subscriber station indicating level at which to receive transmission from the base station. Heeswyk differ from the claimed invention in not specifically teaching the level of interest by transmitting a predetermined signal. However, Sinnarajah disclose (Para 88-91) a multicast call between a primary station and multiple subscriber where if the subscriber station respond based on level of interest. If the subscriber station is interested in participation in the multicast server, the message is sent on a reverse channel to access network. Therefore, it is obvious to one having ordinary skill in the art at the time the invention was made that the level of interest by transmitting a predetermined signal as per teaching of Sinnarajah so as to received transmission from the base station based on indicated power level.

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4. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Van Heeswyk US Patent No. 6, 765, 883 in view of Sinnarajah et al. Pub. No. 2004/0008679 and further in view of Cooper et al. Pub. No. 2002/0069038.

**Regarding Claim 17**, Heeswyk and Sinnarajah differ from the claimed invention in not specifically teaching the primary station transmits a basic data stream as a point-to-multipoint transmission and a supplementary data stream for enhancing a quality of the basic data stream as a point-to-point transmission. However, Cooper discloses (Para 17-19) a primary station coupled to a plurality of secondary station where the primary station can be a simple transmitter for point-to-point or point-to-multipoint with one or more of the secondary station. The primary station uses the error correcting code to detect received errors in the information data which may occur at fixed periodic intervals or at sporadic intervals that coincide with the quality of the link. Therefore, it is obvious to one having ordinary skill in the art at the time the invention was made that the primary station transmits a basic data stream as a point-to-multipoint transmission and a supplementary data stream for enhancing a quality of the basic data stream as a point-to-point transmission as per teaching of Cooper so as to minimize the through-put delay or latency in the communication equipment.

### ***Response to Arguments***

Applicant's arguments, see Page 9 , filed 4/20/2010, with respect to the rejection(s) of claim(s) 1-8, 11-24 under 102 (b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further

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consideration, a new ground(s) of rejection is made in view of Van Heeswyk, US Patent No. 6, 765, 883 which teaches a primary station with multiple secondary station where transmission path between a subscriber station 28 and base station 24 and base station transmit timing signal to the receiving station having subscriber station a level of interest and user control channel 104 wherein one or more slots 120 are designated as random access slot which can be used by subscriber.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NIZAR SIVJI whose telephone number is (571)270-7462. The examiner can normally be reached on 7:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on (571) 272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George Eng/  
Supervisory Patent Examiner, Art Unit 2617

/NIZAR SIVJI/  
Examiner, Art Unit 2617